# Agilent 6570A Series Single-Output, 2000 W DC Power Supplies

Data Sheet

Speed and accuracy for test optimization



- Front panel and analog control of output voltage and current
- Fast, low-noise outputs
- Fan-speed control to minimize acoustic noise
- Protection features to ensure DUT safety

This series of 2000 watt DC power supplies has the exceptional, proven reliability that test system engineers look for. It also has the unusual combination of high efficiency and low noise operation.

These DC power supplies can be controlled either from the front panel or via an analog programming voltage. When used in a test system, the fast up and down programming helps decrease test time. Quickly reacting protection features, including CV/CC mode crossover and over-voltage protection help protect your valuable assemblies from damage.

Lab-bench use is enhanced by the fan-speed control, which minimizes acoustic noise. The extremely low ripple and noise helps the test engineer make extremely accurate current and voltage measurements.

Agilent Technologies

# Specifications

| **Specifications** *(at 0 ° to 55 °C unless otherwise specified)* | | **6571A** | **6572A** | **6573A** | **6574A** | **6575A** | **6571A-J03** Special order option |
|---|---|---|---|---|---|---|---|
| **Number of outputs** | | 1 | 1 | 1 | 1 | 1 | 1 |
| **GPIB** | | No | No | No | No | No | No |
| **Output ratings** | | | | | | | |
| Output voltage | | 0 to 8 V | 0 to 20 V | 0 to 35 V | 0 to 60 V | 0 to 120 V | 14 V |
| Output current | | 0 to 220 A | 0 to 100 A | 0 to 60 A | 0 to 35 A | 0 to 18 A | 150 A |
| **Programming accuracy** (at 25 °C ± 5 °C) | | | | | | | |
| Voltage | 0.04% + | 8 mV | 20 mV | 35 mV | 60 mV | 120 mV | 14 mV |
| Current | 0.1% + | 125 mA | 60 mA | 40 mA | 25 mA | 12 mA | 90 mA |
| **Ripple and noise** from 20 Hz to 20 MHz | | | | | | | |
| Voltage | rms | 650 µV | 750 µV | 800 µV | 1.25 mV | 1.9 mV | 1.5 mV |
| | peak-to-peak | 7 mV | 9 mV | 9 mV | 11 mV | 16 mV | 15 mV |
| Current | rms | 200 mA | 100 mA | 40 mA | 25 mA | 12 mA | 150 mA |
| **Load and line regulation** | | | | | | | |
| Voltage | 0.002% + | 300 µV | 650 µV | 1.2 mV | 2 mV | 4 mV | 600 µV |
| Current | 0.005% + | 10 mA | 7 mA | 4 mA | 2 mA | 1 mA | 7 mA |
| **Transient response time** | | Less than 900 µs for the output voltage to recover to within 100 mV following a change in load from 100% to 50% or 50% to 100% of the output current rating of the supply | | | | | |

| **Supplemental characteristics** *(Non-warranted characteristics determined by design and useful in applying the product)* | **6571A** | **6572A** | **6573A** | **6574A** | **6575A** | **6571A-J03** Special order option |
|---|---|---|---|---|---|---|
| **Average programming resolution** | | | | | | |
| Voltage | 2 mV | 5 mV | 9 mV | 15 mV | 30 mV | 4 mV |
| Current | 55 mA | 25 mA | 15 mA | 8.75 mA | 4.5 mA | 40 mV |
| OVP | 15 mV | 35 mV | 65 mV | 100 mV | 215 mV | 28 mV |
| **Output voltage programming response time*** (excluding command processing time) | 30 ms | 60 ms | 130 ms | 130 ms | 195 ms | 30 ms |

** Full load programming rise/fall time (10% to 90% or 90% to 10%) with full resistive load equal to rated output voltage/rated output current.*

## **Specifications,** continued

| **Specifications** *(at 0 ° to 55 °C unless otherwise specified)* | | **6571A-J04** Special order option | **6571A-J17** Special order option | **6573A-J03** Special order option | **6573A-J08** Special order option | **6574A-J03** Special order option | **6574A-J07** Special order option |
|---|---|---|---|---|---|---|---|
| **Number of outputs** | | 1 | 1 | 1 | 1 | 1 | 1 |
| **GPIB** | | No | No | No | No | No | No |
| **Output ratings** | | | | | | | |
| Output voltage | | 10 V | 15 V | 37.5 V | 40 V | 56 V | 50 V |
| Output current | | 200 A | 120 A | 45 A | 50 A | 38 A | 42 A |
| **Programming accuracy** (at 25 °C ± 5 °C) | | | | | | | |
| Voltage | 0.04% + | 10 mV | 15 mV | 37.5 mV | 40 mV | 60 mV | 60 mV |
| Current | 0.1% + | 125 mA | 90 mA | 40 mA | 35 mA | 28 mA | 30 mA |
| **Ripple and noise** from 20 Hz to 20 MHz | | | | | | | |
| Voltage | rms | 750 µV | 1.5 mV | 800 µV | 1 mV | 1.25 mV | 1.25 mV |
| | peak-to-peak | 9 mV | 15 mV | 9 mV | 10.5 mV | 11 mV | 11 mV |
| Current | rms | 200 mA | 150 mA | 40 mA | 40 mA | 28 mA | 25 mA |
| **Load and line regulation** | | | | | | | |
| Voltage | 0.002% + | 300 µV | 650 µV | 1.2 mV | 1.4 mV | 2 mV | 2 mV |
| Current | 0.005% + | 10 mA | 7 mA | 4 mA | 4 mA | 2 mA | 2 mA |
| **Transient response time** | | Less than 900 µs for the output voltage to recover to within 100 mV following a change in load from 100% to 50% or 50% to 100% of the output current rating of the supply | | | | | |

| **Supplemental characteristics** *(Non-warranted characteristics determined by design and useful in applying the product)* | **6571A-J04** Special order option | **6571A-J17** Special order option | **6573A-J03** Special order option | **6573A-J08** Special order option | **6574A-J03** Special order option | **6574A-J07** Special order option |
|---|---|---|---|---|---|---|
| **Average programming resolution** | | | | | | |
| Voltage | 2.5 mV | 4 mV | 10 mV | 10.5 mV | 14 mV | 12 mV |
| Current | 55 mA | 35 mA | 15 mA | 12.5 mA | 9.5 mA | 11 mA |
| OVP | 20 mV | 30 mV | 65 mV | 75 mV | 100 mV | 85 mV |
| **Output voltage programming response time*** (excluding command processing time) | 35 ms | 35 ms | 130 ms | 130 ms | 130 ms | 130 ms |

** Full load programming rise/fall time (10% to 90% or 90% to 10%) with full resistive load equal to rated output voltage/rated output current.*

## **Specifications,** continued

| **Specifications** *(at 0 ° to 55 °C unless otherwise specified)* | | **6575A-J04** Special order option | **6575A-J06** Special order option | **6575A-J07** Special order option | **6575A-J08** Special order option | **6575A-J09** Special order option | **6575A-J11** Special order option |
|---|---|---|---|---|---|---|---|
| **Number of outputs** | | 1 | 1 | 1 | 1 | 1 | 1 |
| **GPIB** | | No | No | No | No | No | No |
| **Output ratings** | | | | | | | |
| Output voltage | | 160 V | 135 V | 200 V | 100 V | 110 V | 150 V |
| Output current | | 13 A | 16 A | 11 A | 22 A | 20 A | 15 A |
| **Programming accuracy** (at 25 °C ± 5 °C) | | | | | | | |
| Voltage | 0.04% + | 160 mV | 125 mV | 200 mV | 120 mV | 120 mV | 150 mV |
| Current | 0.1% + | 10 mA | 12 mA | 8 mA | 15 mA | 13.5 mA | 11 mA |
| **Ripple and noise** from 20 Hz to 20 MHz | | | | | | | |
| Voltage | rms | 2.8 mV | 2 mV | 3.5 mV | 1.9 mV | 1.9 mV | 2.5 mV |
| | peak-to-peak | 20 mV | 18 mV | 25 mV | 16 mV | 16 mV | 18 mV |
| Current | rms | 18 mA | 12 mA | 15 mA | 15 mA | 13.5 mA | 12 mA |
| **Load and line regulation** | | | | | | | |
| Voltage | 0.002% + | 6 mA | 4 mA | 7 mA | 4 mV | 4 mV | 6 mV |
| Current | 0.005% + | 1 mA | 4 mA | 1 mA | 4 mA | 4 mA | 1 mA |
| **Transient response time** | | Less than 900 µs for the output voltage to recover to within 100 mV following a change in load from 100% to 50% or 50% to 100% of the output current rating of the supply | | | | | |

| **Supplemental characteristics** *(Non-warranted characteristics determined by design and useful in applying the product)* | **6575A-J04** Special order option | **6575A-J06** Special order option | **6575A-J07** Special order option | **6575A-J08** Special order option | **6575A-J09** Special order option | **6575A-J11** Special order option |
|---|---|---|---|---|---|---|
| **Average programming resolution** | | | | | | |
| Voltage | 40 mV | 34 mV | 50 mV | 30 mV | 30 mV | 37.5 mV |
| Current | 3.25 mA | 4 mA | 2.75 mA | 4.5 mA | 4.5 mA | 3.75 mA |
| OVP | 300 mV | 242 mV | 360 mV | 215 mV | 215 mV | 270 mV |
| **Output voltage programming response time*** (excluding command processing time) | 280 ms | 250 ms | 350 ms | 195 ms | 195 ms | 250 ms |

** Full load programming rise/fall time (10% to 90% or 90% to 10%) with full resistive load equal to rated output voltage/rated output current.*

## Supplemental characteristics for all model numbers

**DC floating voltage:** Output terminals can be floated up to ± 240 VDC from chassis ground

**Output common-mode noise current:** (to signal ground binding post)
500 µA rms, 4 mA peak-to-peak

**Remote sensing:** Up to half the rated output voltage can be dropped in each load lead. The drop in the load leads subtracts from the voltage available for the load.

**Modulation:** (Analog programming of output voltage and current)
**Input signal:** 0 to –4 V for voltage, 0 to 7 V for current
**Input impedance:** 30 kΩ or greater

**Input power:** 3,800 VA, 2,600 W at full load; 170 W at no load

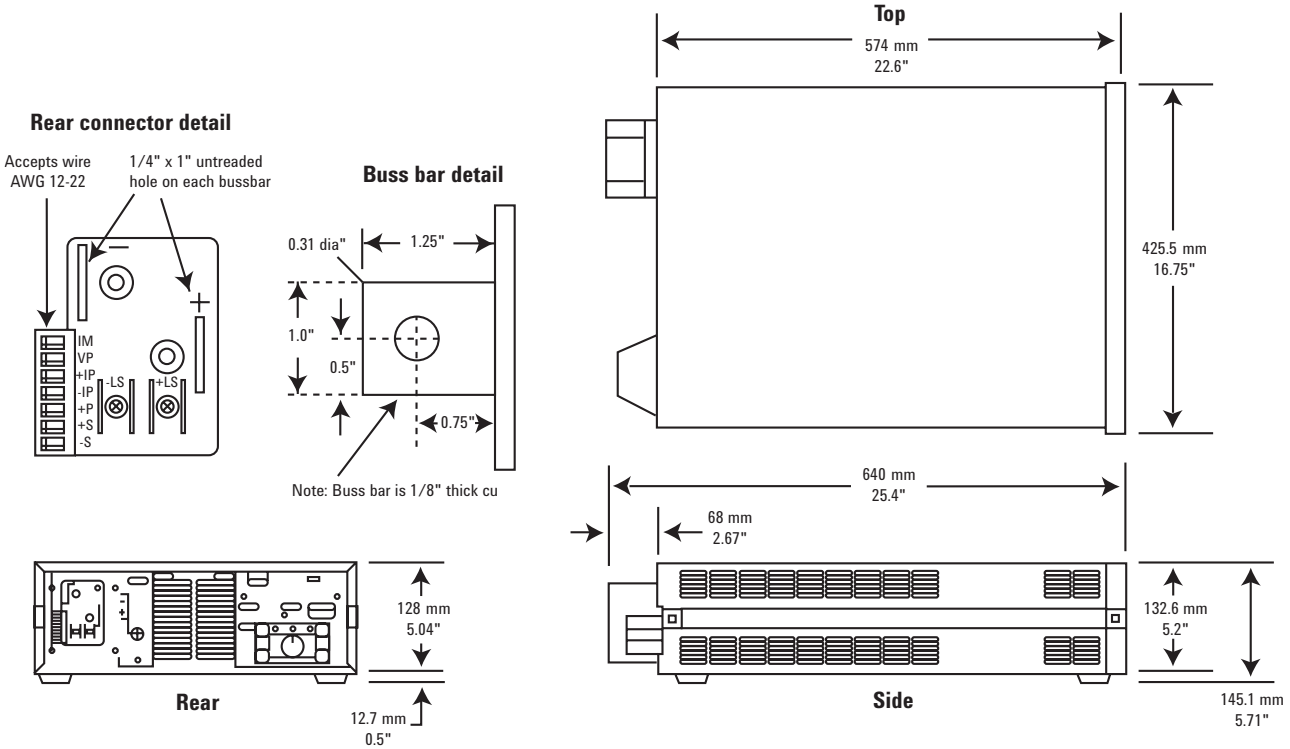
**Regulatory compliance:** Listed to UL1244; certified to CSA556B; conforms to IEC 61010-1

**Size:**
425.5 mm W x 132.6 mm H x 640 mm D
(16.75 in x 5.22 in x 25.2 in)

**Weight:** Net, 28.2 kg (62 lb);
shipping, 31.8 kg (70 lb)

**Warranty:** One year

**Agilent models:** 6571A, 6572A, 6573A, 6574A, 6575A



**www.agilent.com**
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## Ordering information

The 6570 Series power supplies come with full documentation on CD-ROM. The CD-ROM includes user's guide, service manual, quick start guide, and application notes

**Opt 200** 174 to 220 VAC, 47 to 63 Hz (Japan only)
**Opt 230** 191 to 250 VAC, 47 to 63 Hz

**Opt 0L1** Printed user's guide
**Opt 0B3** Printed service manual

### Accessories

**1CM003A*** Rack mount flange kit 132.6 mm H (3U) – two flange brackets
**1CP002A*** Rack mount flange and handle kit 132.6 mm H (3U) – two brackets and front handles
**E3663AC** Support rails for Agilent rack cabinets
**p/n 1494-0059** Accessory slide kit

## Application notes

*Agilent DC Power Supplies for Base Station Testing*, 5988-2386EN

*10 Practical Tips You Need to Know About Your Power Products*, 5965-8239E

* Support rails required

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